

United Engineering Company Shipyard,
Engineering Building
(United Engineering Company Shipyard,
Sheet Metal Shop)
(Building No. 22L)
(Building No. 133T)
(Building No. 18)
2900 Main Street
Alameda
Alameda County
California

HAER No. CA-295-J

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
San Francisco, California

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HISTORIC AMERICAN ENGINEERING RECORD

UNITED ENGINEERING COMPANY SHIPYARD, ENGINEERING BUILDING (United Engineering Company Shipyard, Sheet Metal Shop) (Building No. 22L) (Building No. 133T) (Building No. 18)

HAER No. CA-295-J

Location: 2900 Main Street
Alameda
Alameda County
California

U.S.G.S. 7.5 minute Oakland West, Calif. quadrangle.
Universal Transverse Mercator Coordinates: 10.562xxx.41842xxx

Significance: The Engineering Building is a contributing structure in the United Engineering Company Shipyard historic district that has been determined eligible for the National Register of Historic Places. The United Engineering Company Shipyard, established in 1941 to build and repair ships for the U.S. Navy, is the last surviving of several large World War II shipyards in Alameda. United Engineering built 21 tugboats and repaired hundreds of ships during the war. The facility was one of the largest employers in Alameda and played an important economic and social role in the city. Built in part to provide facilities for 300 women, the Engineering Building represents both the effects of the war on the traditional labor supply in the Bay Area and also the contribution of women to the work of the United Engineering Company during World War II. In addition, the building represents the role of two essential functions in the shipyard complex: engineering design and sheet metal work.

Description: The Engineering Building is a two-story rectangular-shaped building. It measures 200 feet across the east and west façades and 60 feet across the north and south façades. The structure has a total area of 24,000 square feet. Like many of the buildings constructed at the yards from 1941-1945, the Engineering Building is utilitarian in appearance and has little ornamentation.

The building rests on rows of wooden piers. The western piers are sunk in dry land and the eastern piers are sunk in the Wet Basin. As a result, the building sits partially on land and partially above water. The building is composed of a wooden post and beam structural system covered with wood channel rustic siding on the exterior. The roof is basically flat with a slight pitch ostensibly for drainage. Six vents and what appears to be a whistle are located on the roof.

Most windows are double-hung, six-over-six divided lights with wooden sashes. Others are three-by-three divided light awning windows. Several doorways have the original three-by-two divided light, half-glassed doors. However, many others have been replaced with wooden hollow core doors or covered with pressed board. There is a pair of large, wooden, garage doors on the east elevation. Historically there were staircases to the second floor on the west and south elevations. The south staircase has been removed. The building was fully plumbed and had steam heat.

The first floor is divided into two sections. The smaller portion is located at the south end and is closed off from the rest of the building. It is only accessible from exterior doors on the south and west facades. The remaining portion of the first floor is a very large space that is open except for two small rooms in the southwest corner. The walls and ceiling are unfinished with exposed structural members. The floors retain their original treatment, which is wood planking covered by 2 inches of asphalt. Two rows of wooden beams support the second floor. On both floors some of the original fluorescent light fixtures, which were hung on the diagonal, are still extant.

The second floor is also composed principally of a large open space with small rooms on several sides. The north end has a long office, which contains what appears to be a blueprint machine circa 1945. The east side has a women's restroom, vault, and men's restroom. The vault is constructed of reinforced concrete and rests on reinforced concrete piers located on the first floor. The west side of the building has three small rooms surrounding the entrance. The south end of the floor has five small rooms and a hallway (these room appear to be later additions). The floor is wood planking covered with linoleum in some areas.

The building has been little altered and retains a high percentage of original fabric. However, the building is seriously deteriorated.

Historical Context:

In a memo from United Engineering to the Navy's Bureau of Ships dated 20 December 1942, \$96,000 was requested for this building for three purposes: Women's quarters, a sheet metal shop, and an engineering department. These purposes were justified as follows:

1. Women's Quarters. The man power labor supply has become limited in this district and this Company, like other ship-building companies in the vicinity, has found it necessary to employ women in the production department. There are now no sanitary or rest room facilities in the yard for

women workers. It will be necessary to build such facilities sufficient to accommodate at least 300 women.

2. Sheet Metal Shop. The present Sheet Metal Shop... has been found entirely inadequate to accommodate both the ship repairing and the ship building work of the Sheet Metal Department, as it has developed that a very large quantity of sheet metal work is required in the repair and conversion of Navy vessels. It is necessary that 10,000 sq. ft. be set aside for this purpose.
3. Engineering Department. This department is now located in the second floor of a section of the main shop building. It is obvious that this space will be inadequate for the following reason -

The United Engineering Company is the designing agent for Fleet Tugs and, because of major alterations in design, has found it necessary to expand this engineering department extensively. It has also been found that the burden of engineering work in connection with repairs requires expansion of this department. Because of lack of space, outside engineering agencies have been employed to assist in expediting engineering work in connection with conversion and repairs. This arrangement is not satisfactory nor dependable.

The women's quarters and sheet metal shop were to occupy the ground floor and the engineering department was to occupy the second floor.

The Engineering Building was built in 1943 during a construction campaign by United Engineering. The company quickly built numerous buildings to accommodate shipbuilding and repair necessitated by U.S. involvement in World War II. Plans for the Engineering Building were drawn on 1 March 1943 by Alben Froberg, a local architect practicing in Oakland, California. The U.S. Navy—Bureau of Yards and Docks approved the building for construction just two days later.

On the original plans, the building was designated Building 22L. The first floor was a sheet metal shop and the second floor was the engineering department. Plans showed the northern two thirds of the first floor as a large open space called "shop" with rows of

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workbenches placed throughout. Along the edges were spaces for machines such as "shear," "rotary shear," "press," "seamer," "elbow machine," and "welding." At the south end there was a "tool room," "office," a small "boiler room," and a large "locker room" with a "rest room" and "women's lav."¹

The second floor was also a large open room: it was used for drafting. At the north end there was a blueprint room. In the middle of the building along the east wall, the plans called for three rooms - a "women's toilet," "vault," and a "men's toilet." Across the building on the west wall there was a small office and a reception room.²

In 1970, the Engineering Building was listed by Alameda County as building no. 41. By the end of the period of ownership by the Todd Shipyards Corporation, it was called building 133T, a designation that continues to be used today.

Sources:

Alameda County Recorder. Exhibit B: Description of Buildings, Waterfront Improvements, Shipyard Utilities, Machinery and Equipment. 18 February 1970. RE: 2568, IM 80-82.

Alameda Gateway. Existing Site Plan. 30 January 1984.

Froberg, Alben, Architect. *Building 22L*. Alameda, CA: United Engineering Co., Ltd., Alameda Shipyard, Ship Repair Facilities, 1 March 1943.

Kennedy, Clyde C., Engineering Office of. "Area Plan and Interceptor Profile: Improvements to Sewer System for Properties Occupied by Todd Shipyards Corp., Alameda, Calif." Prepared for Matson - United Properties, Inc. 9 August 1951.

Sanborn Map Company. Insurance Maps of Alameda, California, p. 93. New York: 1948.

Thompson, Richard G., Lieutenant Colonel, San Francisco District, Corps of Engineers. Letter to Cheryl Widell, State Historic Preservation Officer, requesting Determination of Eligibility. 30 April 1998.

United Engineering Company Ltd. Alameda Shipyard, San Francisco Area, Sketch No. 48. 10 February 1944.

¹ Froberg, Alben, Architect. *Building 22L*. Alameda, CA: United Engineering Co., Ltd., Alameda Shipyard, Ship Repair Facilities, 1 March 1943.

² Ibid., sheet 7.

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United Engineering Company Ltd. Alameda Shipyard: Map Showing Existing Facilities and Those Under Construction. 22 October 1942.

United Engineering Company Ltd. Map of Alameda Shipyard Showing Existing and Proposed Additional Facilities. Plan no. UEC-A-1-7. 14 June 1943.

United Engineering Company Ltd. Memo to Bureau of Ships, Washington DC. "Contract NObs-76 - Funds for completion of plant facilities". 20 December 1942.

United Engineering Company Ltd. Memo to Chief of the Bureau of Yards and Docks. "Reproduction Costs and Market Value to Third Parties of 'Civil Works'", with Estimated Schedule of "Civil Works" Facilities. 8 February 1946.

United States. Army Corps of Engineers - San Francisco District and California. State Historic Preservation Officer. Memorandum of Agreement Regarding the Oakland Harbor Navigation Improvements Project, Alameda County, California. Signed 31 January 2001 and 22 January 2001.

Widell, Cheryl, State Historic Preservation Officer. Letter to Richard G. Thompson, Lieutenant Colonel, San Francisco District, Corps of Engineers, Regarding Oakland Harbor Ship Channel Deepening and Improvements, Alameda County [Determination of Eligibility Concurrence]. 9 June 1998.

Project Information:

This report was prepared for the U.S. Army Corps of Engineers and the Port of Oakland in accordance with a Memorandum of Agreement (MOA) between the U.S. Army Corps of Engineers, San Francisco District and the California State Historic Preservation Officer concerning the former United Engineering Company shipyard. The Port of Oakland and the City of Alameda were concurring parties to the MOA. The MOA was created because of a proposal by the U.S. Army Corp of Engineers in partnership with the Port of Oakland to sponsor the Oakland Harbor Navigation Improvements Project. This project "would deepen Oakland Harbor channels and berth areas from -42 feet mean lower low water (MLLW) to -50 feet MLLW, with 2 feet overdredge allowance" and widen some portions of the channels. These actions, which would constitute an Undertaking under Section 106, would result in the demolition of several buildings and structures at the former United Engineering Company Shipyard. Because the shipyard had been determined eligible for the National Register of Historic Places, the Undertaking would have an adverse effect on the property. Under the MOA, the following HAER documentation has

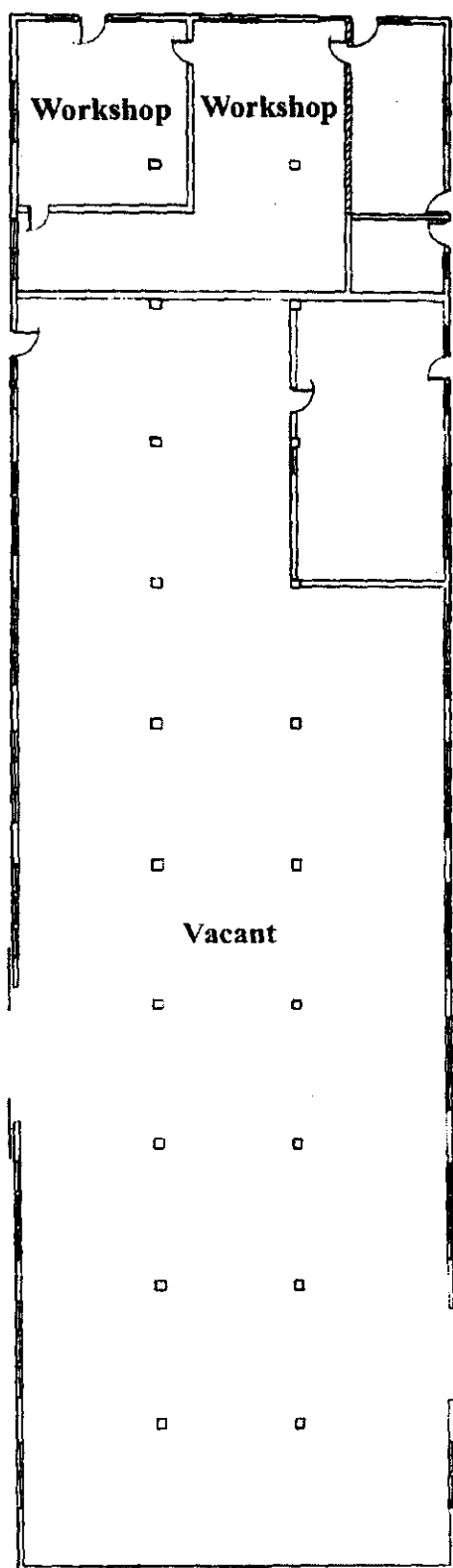
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been prepared: a written historic and descriptive report on the shipyard as a whole, seventeen separate reports on individual buildings and structures in the shipyard, including this report, and photographic documentation.

Building No. 18 will be demolished by the federal undertaking.

This report was prepared by Jody Stock, architectural designer, and Michael R. Corbett, architectural historian. Corbett was a subcontractor to Basin Research Associates of San Leandro. Basin Research was under contract to g. borchard & associates.

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BUILDING NO. 18:
ENGINEERING BUILDING
First Floor Plan

Prepared by Jody R. Stock
1/11/01

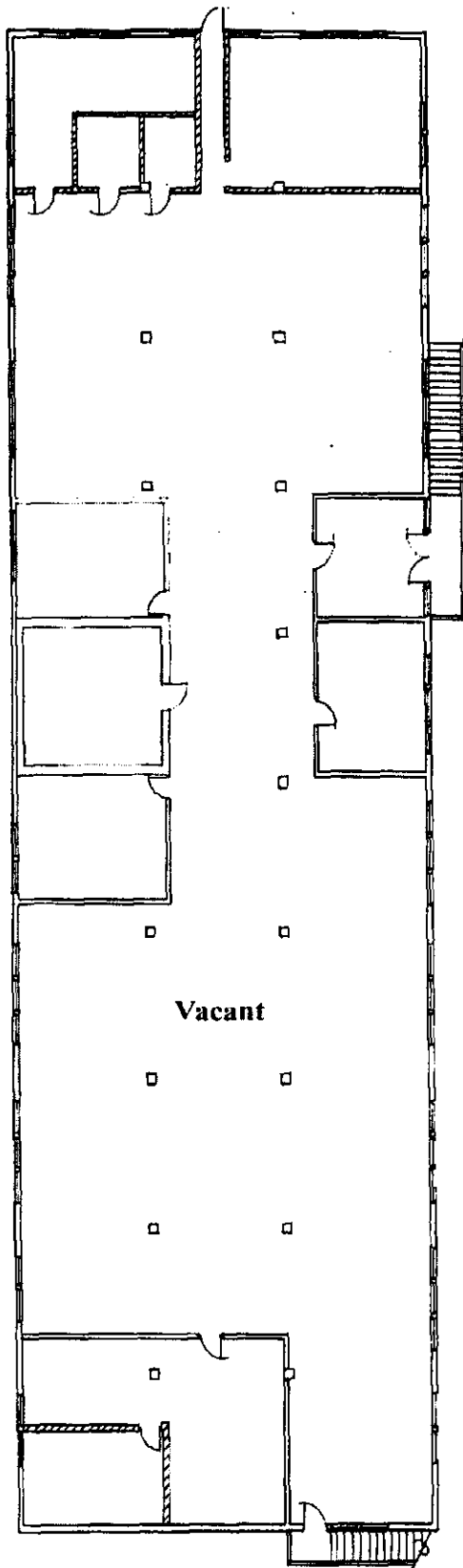


NORTH



*Plan is based on scaled drawing, Alben Froberg, Architect, Building No. 22L (Alameda, CA: United Engineering Co., Ltd., Alameda Shipyard, Ship Repair Facilities, 1 March 1942). The plan has been altered to reflect current field conditions. The walls that have been added (after the 1942 plan) are indicated with hashmarks and are not to scale.

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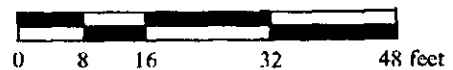


BUILDING NO. 18:
ENGINEERING BUILDING
Second Floor Plan

Prepared by Jody R. Stock
1/11/01



NORTH



*Plan is based on scaled drawing, Alben Froberg, Architect, *Building No. 22L* (Alameda, CA: United Engineering Co., Ltd., Alameda Shipyard, Ship Repair Facilities, 1 March 1942). The plan has been altered to reflect current field conditions. The walls that have been added (after the 1942 plan) are indicated with hashmarks and are not to scale.